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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,206	02/28/2002	Patrick Jay Lutz	5408/1H638-US1	6901
7590 09/24/2004			EXAMINER	
DARBY & DARBY P.C. 805 Third Avenue New York, NY 10022			CLARDY, S	
			ART UNIT	PAPER NUMBER
			1616	
DATE MAILED: 09/24/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,206

Applicant(s)

LUTZ ET AL.

Examiner

S. Mark Clardy

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1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-40 is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-22, 24-37 and 41 is/are rejected.
- 7) ☐ Claim(s) 17 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

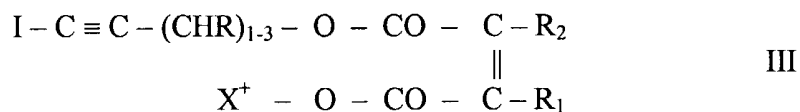
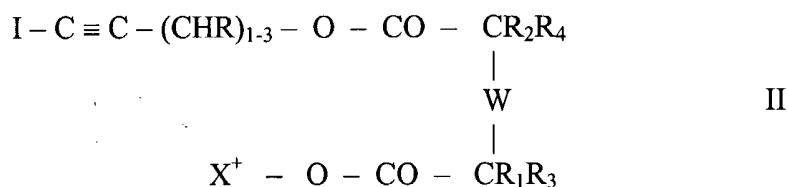
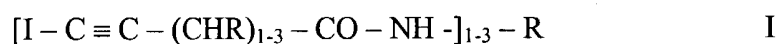
Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/8, 9/26/ 11/5/02</u> . | 6) <input type="checkbox"/> Other: _____ |

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Claims 1-41 are pending in this application which claims benefit of US provisional application 60/273,079, filed March 1, 2001.

Applicants' claims are drawn to compositions comprising an iodine containing biocide in combination with either a ketone acid or an aromatic carboxylic acid (claim 1). The preferred iodine containing biocide is an iodopropargyl compound:



The iodine containing compound may be encapsulated in cyclodextrin (claim 7). The ketone acid may be a 1, 2, or 3 ring cyclic ketone acid or salt thereof (claims 10-12). Specifically claimed are synergistic antimicrobial compositions comprising 3-iodo-2-propynyl butyl carbamate in combination with dehydroacetic acid/salt and/or salicylic acid/salt (claims 38-40).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 5, 6, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The structure of formula I in claim 2 is identified as being a carbamate; however, it is not a carbamate (-C-O-CO-NH-), but an amide (-C-CO-NH-) because it lacks the intervening -O- atom. Examination has proceeded based on the assumption that -O- will be inserted into Formula I in the specification and claims. Although claim 2 allows for the possibility of multiple bonds to a hydrogen atom, one of ordinary skill in chemistry would understand that when $q > 1$, then R cannot be H.

It appears that claim 8 was intended to depend from claim 1, not from subsequent claim 10. Claims should depend from previous claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 24-26, 28, 34, and 35 are rejected under 35 U.S.C. 102(a) and (b) as being anticipated by Schapira et al (EP 0 228 943).

Schapira et al teach the combination of the iodine containing herbicide ioxynil with the aromatic acid herbicide mecoprop (Table II), with acid:iodine compound ratios of 3:1 (i.e., 480:160 and 360:120), in emulsifiable concentrate form (p. 2, lines 26-28) which are diluted with water prior to application. The compositions comprise various solvents (p. 3-4) and components such as alcohols (methanol, isopropanol, isobutanol: p. 4, lines 7-10).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16, 18-22, 24-37, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Tsen (US 5,073,570), Gaglani (US 5,906,981), and Gueret (US 2001/0031168).

Tseng teaches that halopropargyl carbamates, particularly 3-iodo-2-propargyl butyl carbamate, or IPBC, is a well known antimicrobial agent, but that its use is limited for various reasons (col 1, lines 15-28). The iodine containing antimicrobial compounds of applicants' formulas II and III are disclosed as being an improvement on IPBC (a compound of formula I). Various conventional solvents are disclosed (col 3, lines 27-33; col 4, lines 27-33), as are customary formulations (col 4, lines 18-26). The claimed halocarbamates are useful in cosmetics, personal care products, household products, and industrial materials (col 3, lines 48-65).

Gaglani teaches that IPBC may be formulated with cyclodextrin as an antibacterial inclusion complex for use in aqueous compositions such as paints, coatings, cleaners, and other products (col 1, lines 35-56).

Gueret teaches that several biocidal agents are known for use in cosmetic or personal care products, including salicylic acid, benzoates, hydroxybenzoates, dehydroacetates, etc (para 45).

One of ordinary skill in the art of antimicrobial compositions would be motivated to combine these references because they disclose known antimicrobial agents for use as preservatives and in microbicidal compositions.

Thus it would have been *prima facie* obvious to the ordinary artisan at the time the invention was made to have combined iodine containing antimicrobial agents with either ketone

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acid or aromatic carboxylic acid biocides because these classes of antimicrobial agents are all well known in the antimicrobial art, and because it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in the prior art. In re Kerkhoven, 205 USPQ 1069. Further, determination of appropriate concentration ranges and ratios, and selection of conventional additives, are within the skill level of the ordinary artisan, and are obvious absent evidence of unexpected results. Finally, objective evidence of nonobviousness must be commensurate in scope with the scope of the claims. In re Tiffin, 171 USPQ 294.

Applicants have presented data in the specification which demonstrates synergistically improved activity for the combinations of iodopropynyl butylcarbamate with dehydroacetic acid and/or salicylate.

Claims 17 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 38-40 are allowed.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is 571-272-0611. The examiner can normally be reached on 7:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on 571-272-0887. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "S. Mark Clardy". The signature is fluid and cursive, with a large initial "S" and a stylized "C" at the end.

S. Mark Clardy
Primary Examiner
Art Unit 1616

September 22, 2004